

AMENDMENTS TO THE CLAIMS

1. (currently amended) A method for at least one of encoding and decoding an image, comprising:

(a) identifying ~~adjacent regions~~ a first region and a second region adjacent to each other in said image;

~~(b) identifying coding parameters for said adjacent regions;~~

~~(c) identifying transform coefficients for said adjacent regions;~~

~~(d) identifying DC components and AC components in said transform coefficients; and~~

~~(e) (b)~~ selectively filtering at least a portion of said regions proximate the boundary between said adjacent regions;

(c) controlling said filtering based upon a boundary strength value; and

(d) determining said boundary strength value based upon at least whether a reference image used for a motion prediction of said first region is different from a reference image used for a motion prediction of said second region

~~wherein said selectively filtering is based upon a similarity of said DC components and said AC components.~~

2. (withdrawn) A method for at least one of encoding and decoding an image, said method comprising:

(a) identifying adjacent regions in said image;

(b) examining coding parameters for said adjacent regions;

(c) selectively filtering at least a portion of said regions

proximate a boundary between said adjacent regions based upon said coding parameters;

(d) identifying similarities between coding parameters in a luminance channel of said adjacent regions ; and

(e) controlling filtering for both the luminance channel and a chrominance channel in said image according to similarities in the luminance channel.

3. (withdrawn) A method for at least one of encoding and decoding an image, said method comprising:

- (a) identifying adjacent regions in said image;
- (b) examining coding parameters for said adjacent regions;
- (c) selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions based upon whether at least one of said adjacent regions is intra-coded.

4. (withdrawn) A method for at least one of encoding and decoding an image, comprising:

- (a) identifying adjacent regions in said image;
- (b) examining coding parameters for said adjacent regions;
- (c) selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions based upon whether at least one of said adjacent regions is encoded with residuals.

5. (withdrawn) A method for at least one of encoding and decoding an image, comprising:

- (a) identifying adjacent regions in said image;
- (b) examining coding parameters for said adjacent regions;
- (c) selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions, said filtering based upon determining whether at least two of said adjacent regions are predicted based upon two different reference frames.

6. (withdrawn) A method for at least one of encoding and decoding an image, comprising:

- (a) identifying adjacent regions in said image;
- (b) examining coding parameters for said adjacent regions;
- (c) selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions based upon determining whether at least two of said adjacent regions have

an absolute difference of motion vectors that has a mathematical relationship to a threshold value.

7. (withdrawn) The method of claim 6 wherein said absolute difference is in a first direction.

8. (withdrawn) The method of claim 7 wherein said absolute difference is also in a second direction different than said first direction.

9. (withdrawn) A method for at least one of encoding and decoding an image, comprising:

- (a) identifying adjacent regions in said image;
- (b) examining coding parameters for said adjacent regions; and
- (c) selectively filtering at least a portion of said regions

proximate a boundary between said adjacent regions based upon said coding parameters and wherein said selectively filtering uses a first filter when said adjacent regions are intra-coded.

10. (withdrawn) A method for at least one of encoding and decoding an image, comprising:

- (a) identifying adjacent regions in said image;
- (b) examining coding parameters for said adjacent regions; and
- (c) selectively filtering at least a portion of said regions proximate the boundary between

said adjacent regions based upon said coding parameters, wherein said selectively filtering uses a first filter when said adjacent regions are intra-coded and a second filter when at least one of said adjacent regions is encoded with residuals.

11. (withdrawn) A method for at least one of encoding and decoding an image, comprising:

- (a) identifying adjacent regions in said image;

- (b) examining coding parameters for said adjacent regions; and
- (c) selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions based upon said coding parameters;
- (d) wherein said selectively filtering uses a first filter when said adjacent regions are intra-coded, a second filter when at least one of said adjacent regions is encoded with residuals, and a third filter when said adjacent regions are predicted based upon two different reference frames.

12. (withdrawn) A method for at least one of encoding and decoding an image, comprising:

- (a) identifying adjacent regions in said image;
- (b) examining coding parameters for said adjacent regions; and
- (c) selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions based upon said coding parameters, wherein said selectively filtering uses a first filter when said adjacent regions are intra-coded, a second filter when at least one of said adjacent regions is encoded with residuals, a third filter when at least two of said adjacent regions are predicted based upon two different reference frames, and said third filter when at least two of said adjacent regions have an absolute difference of motion vectors of said at least two adjacent regions, said absolute difference having a mathematical relationship to a threshold value.

13. (currently amended) An encoder for encoding an image, ~~said encoder~~ comprising:
- ~~(a) a first~~ an identifier for identifying adjacent regions a first region and a second region adjacent to each other in said image; and
 - ~~(b) an examiner for examining coding parameters for said adjacent regions;~~
 - ~~(c) a filter for selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions, based upon said coding parameters~~ wherein;
 - ~~(d) a second identifies for identifying DC and AC components for said adjacent regions; and~~

~~(e) a filter controller for controlling said selectively filtering based upon a similarity of said DC and said AC components.~~

(a) said filter is controlled based upon a boundary strength value, and

(b) said boundary strength value is determined based upon at least whether a reference image used for a motion prediction of said first region is different from a reference image used for a motion prediction of said second region.

14. (withdrawn) An encoder for encoding an image comprising:

- (a) a first identifier for identifying adjacent regions in said image;
- (b) an examiner for examining coding parameters for said adjacent regions;
- (c) a filter for selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions based upon said coding parameters;
- (d) a second identifier for identifying similarities between coding parameters in a luminance channel of said adjacent regions; and
- (e) a filter controller for controlling said filter, wherein said filter is applied to said luminance channel and a chrominance channel based on similarities in the coding parameters of said luminance channel.

15. (withdrawn) An encoder for encoding an image comprising:

- (a) a first identifier for identifying adjacent regions in said image;
- (b) an examiner for examining coding parameters for said adjacent regions;
- (c) a filter for selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions based upon said coding parameters; wherein said selectively filtering is based upon determining whether at least one of said adjacent regions is infra-coded.

16. (withdrawn) An encoder for encoding an image comprising:

- (a) a first identifier for identifying adjacent regions in said image;
- (b) an examiner for examining coding parameters for said adjacent regions;
- (c) a filter for selectively filtering at least a portion of said regions proximate a boundary

between said adjacent regions based upon said coding parameters; wherein said selectively filtering is based upon determining whether at least one of said adjacent regions is encoded with residuals.

17. (withdrawn) An encoder for encoding an image comprising: (a) a first identifier for identifying adjacent regions in said image;

(b) an examiner for examining coding parameters for said adjacent regions;

(c) a filter for selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions based upon said coding parameters; wherein said selectively filtering is based upon determining whether at least two of said adjacent regions are predicted based upon two different reference frames.

18. (withdrawn) An encoder for encoding an image comprising:

(a) a first identifier for identifying adjacent regions in said image;

(b) an examiner for examining coding parameters for said adjacent regions;

(c) a filter for selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions based upon said coding parameters; wherein said selectively filtering is based upon determining whether at least two of said adjacent regions have an absolute difference of motion vectors that is greater than or less than a threshold value.

19. (withdrawn) The encoder of claim 18 wherein said absolute difference is in a first direction.

20. (withdrawn) The encoder of claim 19 wherein said absolute difference is also in a second direction different than said first direction.

21. (withdrawn) An encoder for encoding an image comprising:

(a) a first identifier for identifying adjacent regions in said image;

(b) an examiner for examining coding parameters for said adjacent regions;

(c) at least one filter for selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions based upon said coding parameters; wherein said selectively filtering uses a first filter when said adjacent regions are infra-coded.

22. (withdrawn) An encoder for encoding an image comprising:

- (a) a first identifier for identifying adjacent regions in said image;
- (b) an examiner for examining coding parameters for said adjacent regions;

(c) a plurality of filters for selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions based upon said coding parameters; wherein said selectively filtering uses a first filter when said adjacent regions are infra-coded and a second filter when at least one of said adjacent regions is encoded with residuals.

23. (withdrawn) An encoder for encoding an image comprising:

- (a) a first identifier for identifying adjacent regions in said image;
- (b) an examiner for examining coding parameters for said adjacent regions;

(c) a filter for selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions based upon said coding parameters; wherein said selectively filtering uses a first filter when said adjacent regions are infra-coded, a second filter when at least one of said adjacent regions is encoded with residuals, and a third filter when at least two of said adjacent regions are predicted based upon two different reference frames.

24. (withdrawn) An encoder for encoding an image comprising:

- (a) a first identifier for identifying adjacent regions in said image;
- (b) an examiner for examining coding parameters for said adjacent regions;

(c) a filter for selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions based upon said coding parameters; wherein said selectively filtering uses a first filter when said adjacent regions are infra-coded, a second filter when at least one of said adjacent regions is encoded with residuals, a third filter when at least two of said adjacent regions are predicted based upon two different reference frames, and said third filter

when at least two of said adjacent regions have an absolute difference of motion vectors that is greater than or less than a threshold value.

25. (currently amended) A decoder for ~~encoding~~ decoding an image comprising:

- ~~(a) a first~~ an identifier for identifying adjacent regions a first region and a second region adjacent to each other in said image; and
- ~~(b) an examiner for examining coding parameters for said adjacent regions;~~
- ~~(c) a filter for selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions, based upon said coding parameters; wherein~~
- ~~(d) a second identifier for identifying DC and AC components for said adjacent regions; and~~
- ~~(e) a filter controller for controlling said selectively filtering based upon a similarity of said DC and said AC components.~~

- (a) said filter is controlled based upon a boundary strength value and
- (b) said boundary strength value is determined based upon at least whether a reference image used for a motion prediction of said first region is different from a reference image used for a motion prediction of said second region.

26. (withdrawn) An encoder for encoding an image comprising

- (a) a first identifier for identifying adjacent regions in said image;
- (b) an examiner for examining coding parameters for said adjacent regions;
- (c) a filter for selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions based upon said coding parameters;
- (d) a second identifier for identifying similarities between coding parameters in a luminance channel of said adjacent regions; and
- (e) a filter controller for controlling said filter, wherein said filter is applied to said luminance channel and a chrominance channel based on similarities in the coding parameters of said luminance channel.

27. (withdrawn) A decoder for decoding an image comprising:
(a) a first identifier for identifying adjacent regions in said image;
(b) an examiner for examining coding parameters for said adjacent regions;
(c) a filter for selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions based upon said coding parameters; wherein said selectively filtering is based upon determining whether at least one of said adjacent regions is intra-coded.

28. (withdrawn) A decoder for decoding an image comprising:
(a) a first identifier for identifying adjacent regions in said image;
(b) an examiner for examining coding parameters for said adjacent regions;
(c) a filter for selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions based upon said coding parameters; wherein said selectively filtering is based upon determining whether at least one of said adjacent regions is encoded with residuals.

29. (withdrawn) A decoder for decoding an image comprising:
(a) a first identifier for identifying adjacent regions in said image;
(b) an examiner for examining coding parameters for said adjacent regions;
(c) a filter for selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions based upon said coding parameters; wherein said selectively filtering is based upon determining whether at least two of said adjacent regions are predicted based upon two different reference frames.

30. (withdrawn) A decoder for decoding an image comprising:
(a) a first identifier for identifying adjacent regions in said image;
(b) an examiner for examining coding parameters for said adjacent regions;
(c) a filter for selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions based upon said coding parameters; wherein said selectively

filtering is based upon determining whether at least two of said adjacent regions have an absolute difference of motion vectors that is greater than or less than a threshold value.

31. (withdrawn) The decoder of claim 30 wherein said absolute difference is in a first direction

32. (withdrawn) The decoder of claim 31 wherein said absolute difference is also in a second direction different than said first direction.

33. (withdrawn) A decoder for decoding an image comprising:
(a) a first identifier for identifying adjacent regions in said image;
(b) an examiner for examining coding parameters for said adjacent regions;
(c) at least one filter for selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions based upon said coding parameters; wherein said selectively filtering uses a first filter when said adjacent regions are infra-coded.

34. (withdrawn) A decoder for decoding an image comprising:
(a) a first identifier for identifying adjacent regions in said image;
(b) an examiner for examining coding parameters for said adjacent regions;
(c) a plurality of filters for selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions based upon said coding parameters; wherein said selectively filtering uses a first filter when said adjacent regions are infra-coded and a second filter when at least one of said adjacent regions is encoded with residuals.

35. (withdrawn) A decoder for decoding an image comprising:
(a) a first identifier for identifying adjacent regions in said image;
(b) an examiner for examining coding parameters for said adjacent regions;
(c) a filter for selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions based upon said coding parameters; wherein said selectively filtering uses a first filter when said adjacent regions are infra-coded, a second filter when at least

one of said adjacent regions is encoded with residuals, and a third filter when at least two of said adjacent regions are predicted based upon two different reference frames.

36. (withdrawn) A decoder for decoding an image comprising:

- (a) a first identifier for identifying adjacent regions in said image;
- (b) an examiner for examining coding parameters for said adjacent regions;
- (c) a filter for selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions based upon said coding parameters; wherein said selectively filtering uses a first filter when said adjacent regions are intra-coded, a second filter when at least one of said adjacent regions is encoded with residuals, a third filter when at least two of said adjacent regions are predicted based upon two different reference frames, and said third filter when at least two of said adjacent regions have an absolute difference of motion vectors that is greater than or less than a threshold value.

37. (withdrawn) A computer readable medium comprising instructions for performing the acts of

- (a) identifying adjacent regions in said image;
- (b) examining coding parameters for said adjacent regions;
- (c) selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions based -upon said coding parameters;
- (d) identifying similarities between coding parameters in a luminance channel of said adjacent regions ; and
- (e) controlling filtering for both the luminance channel and a chrominance channel in said image according to similarities in the luminance channel.

38. (withdrawn) A computer data signal embodied in an electronic transmission, said signal comprising instruction for:

- (a) identifying adjacent regions in said image;
- (b) examining coding parameters for said adjacent regions;

(c) selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions based upon said coding parameters;

(d) identifying similarities between coding parameters in a luminance channel of said adjacent regions;

(e) controlling filtering for both the luminance channel and a chrominance channel in said image according to similarities in the luminance channel.